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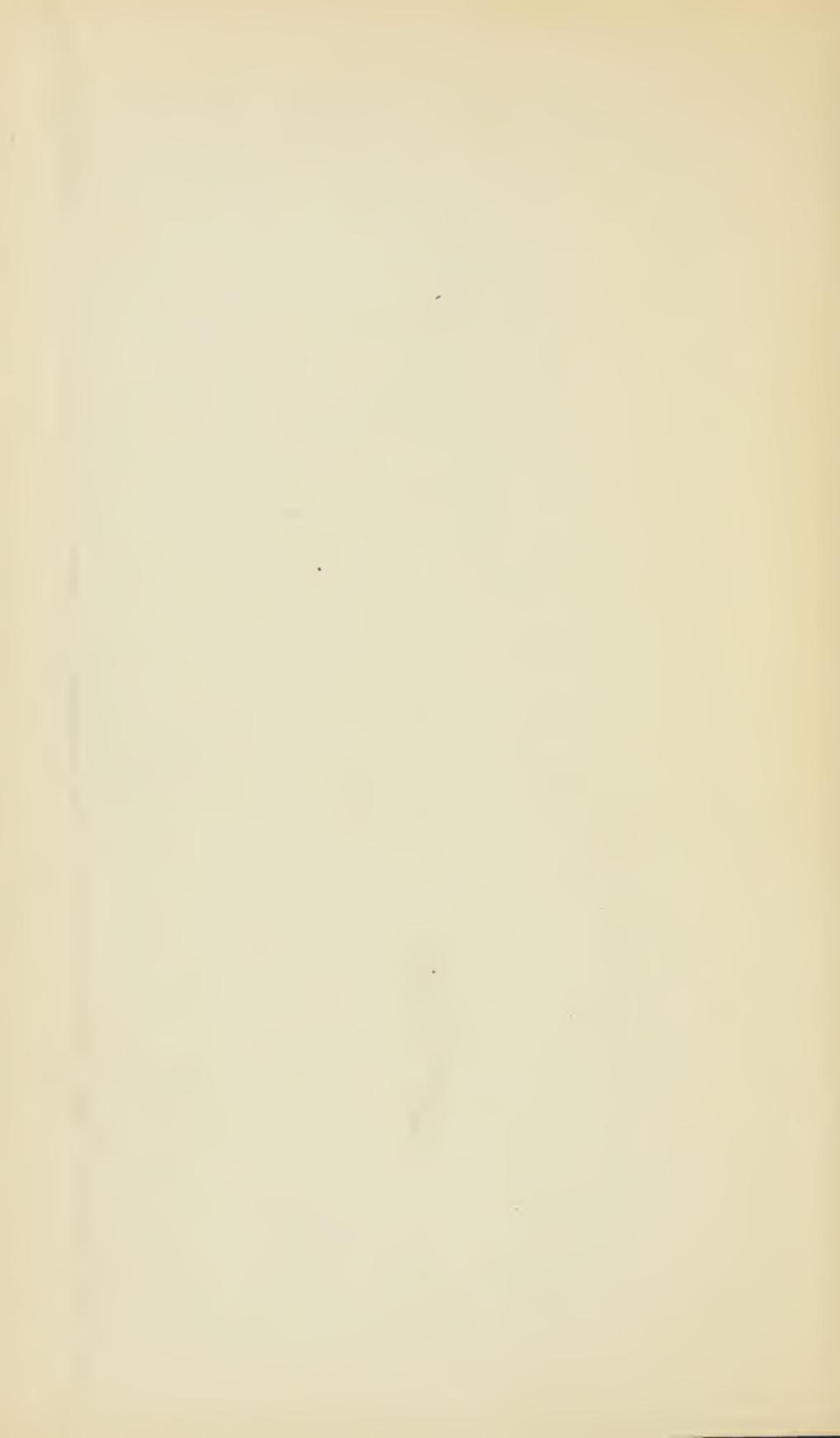
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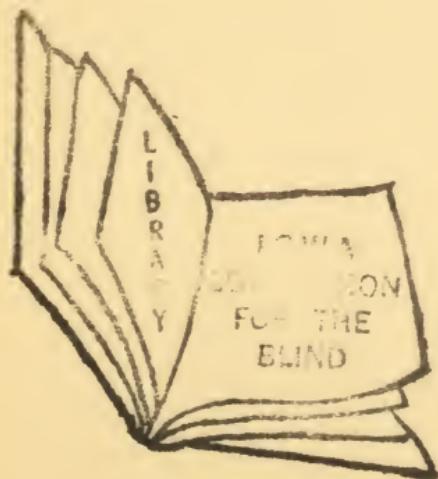
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THE VISION OF A BLIND MAN.





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EDWARD LIVINGSTON YOUMANS

Founder of

POPULAR SCIENCE MONTHLY

The Vision

of a Blind Man

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The Vision of a Blind Man

The progress due to science and invention in America, which makes this Twentieth Century so wonderful, so rich, is a tribute to the vision of a blind man.

The science department in every university, the technical schools, owe more to him than to any other one personal force.

Hundreds of thousands in this generation whose success is due to him, or who are benefitting through the work he did, do not even know the name of Edward Livingston Youmans.

In his lifetime this self-taught man was recognized as the best informed intelligence in the nation. He has been dead less than sixty years.

He made science popular in the homes of America

Youmans' work can be summed up in four words: He made science popular.

In teaching himself the sciences, handicapped as he was with blindness, Youmans realized the barriers of learning within which scientific men had isolated themselves.



Since the time, more than two thousand years ago, when Archimedes discovered the lever, the pulley and the screw, since the day science was born, in fact, scientists had been an exclusive folk, a sort of high priesthood.

They shared their knowledge with each other. None but the elect were permitted to enter within their circle. Their constant ex-

cuse was that without technical mastery there could be no science and that only the trained mind could understand technicalities.

When Youmans began his life work eighty years ago he realized his mission was that of an interpreter.

He knew that science must become a part of the daily life of human beings, if civilization was to go forward. His own experience proved to him how difficult it was to get the necessary knowledge.

With his sightless eyes he looked into the future

He saw the social and industrial revolution that science could bring about, once people understood its laws, and how these laws could be made to work for them.

There wasn't any popular demand for science in those days; it was considered something absolutely apart from the daily life of people.

Youmans, a practical man who made his dreams come true, had to make people realize a need of which they were unconscious, and then supply that need.



He invented just one device — the chart or diagram object lesson, in universal use to-day and as effective as it was when the “graphic” brought Youmans into national prominence.

A color chemical chart invented by a blind man

Tens of thousands learned the rudiments of chemistry by looking at a color chart devised by a blind man. This revealed, almost at a glance, the whole mechanism of chemi-

cal combinations, as it was then conceived.

Youmans supplemented this with a text book on chemistry and 150,000 copies were sold.

A friendship and business relation that lasted forty years was begun when the blind man was led into the store of D. Appleton & Co., then on Broadway below the City Hall, to borrow from a bookseller a volume he could not afford to buy and which he could not find in the libraries. Youmans' advice made Appleton's the leading publishers of scientific books in America. The editing of scientific books, his own writings, his success on the platform — Youmans was a popular lecturer for seventeen years — did not educate people fast enough to satisfy this man of action.

He could make science understandable

But he could not reach people in sufficient numbers. He wanted to sell science to the whole people.

He knew that what was needed was a magazine. It is the medium that can give national publicity. It has the power of iteration; its value depends upon its success in supplying a human need.

Herbert Spencer brought the magazine into being

While the idea was Youmans', Herbert Spencer deserves the credit for bringing the POPULAR SCIENCE Monthly into actual being. A warm friendship had sprung up be-



tween the two, based upon the American's admiration for the Englishman's work.

Youmans had written to Spencer that he had temporarily abandoned the plan of start-

ing the magazine when he received the first of a series of articles which Spencer had promised to write for the new publication. The articles reached Youmans in April, 1872,



and the first issue of the new magazine appeared the following month.

The Herbert Spencer articles made a sensation and the magazine was a success from the start.

POPULAR SCIENCE Monthly is now entering its eighth successful decade.

**Famous men who thought deeply
and wrote simply**

Youmans was able to get great men to write for his magazine. In addition to Spen-

cer's there were articles by John Tyndall, Thomas Huxley, Professor R. A. Proctor, Dr. Henry Maudsley, Henry Ward Beecher and others who thought profoundly and were able to write simply.

Within a year and a half the circulation was 12,000 and that was a tremendous circulation for a scientific monthly that sold for fifty cents a copy and \$5 a year.

The POPULAR SCIENCE Monthly became the most famous publication in America because it was as widely known in Europe as it was in this country.



Youmans edited the magazine until his death in 1887. His successors, under different ownerships, ably maintained his original

policy long after this policy accomplished its work.

The Youmans idea is as big, as vital, as ever it was. To-day, however, a fresh interpreta-



tion, a rational interpretation, to meet conditions Youmans was instrumental in bringing about is necessary.

Over seventy years after

The reason for the present method of editing *POPULAR SCIENCE* Monthly is the same as was the reason for starting the publication, for in his prospectus which appeared in the first number, the founder of the magazine said:

“The growing importance of scientific

knowledge to all classes of the community calls for more efficient means of diffusing it."

The more efficient means for diffusing knowledge

The change in the policy of the **POPULAR SCIENCE** Monthly, which occurred in 1916 when the present management bought the magazine, meant simply that a more efficient means of diffusing scientific knowledge had been provided.

There are now a thousand laboratories



where there was one in the days when Youmans was a student. Instead of propaganda for laboratories, **POPULAR SCIENCE** Monthly now gives the news that comes from these

laboratories it helped to establish.

It is perhaps the most important news of all. The quiet men at work in laboratories decided the First World War just as they developed the new marvels of science for winning the Second World War, and the great developments in industry and living for the Peace.

Making the big idea work to fit these big times

The laboratories are not all in the universities, technical schools and great industrial corporations.

Wherever a man has fitted up a little workshop for himself to carry out his ideas along scientific lines, that shop is a laboratory. News comes from it — sometimes the biggest news.

It is the function of POPULAR SCIENCE Monthly, not only to report this news but to interpret it — to explain it in words and pictures — to make it graphic — to show how

it can make the daily life of human beings easier, richer, happier.

The new device for everyday, familiar use, and the discovery that leads to the foun-



dation of a new industry, come within its scope. It tells how to make and use the new things that make life and work easier and reports the great advances in abstract science in words any intelligent reader can understand without effort, explaining the meaning of these discoveries and just what work they will do.

It now takes many men

The editors of **POPULAR SCIENCE** Monthly must have full knowledge, complete

understanding of the language in which science speaks, and be able to interpret and explain it to meet human needs—needs they must understand and sympathize with.

Edward L. Youmans had this capacity; so have his successors, the editors of the POPULAR SCIENCE Monthly of to-day.

Youmans had this gift for the people of his day; the present editors of the POPULAR SCIENCE Monthly have it for the people of this day.

Where one man once made the magazine, it now requires many. The scope of POPULAR SCIENCE Monthly has broadened with the wider influence of scientific discoveries in the entire field of human endeavor, and today we have a group of editors consisting of specialists in various scientific fields, supplemented by others whose newspaper background renders them expert in the translation of scientific developments into the kind of news that the progressive layman wants and reads.

Making science usable

Since the day of Youmans' **POPULAR SCIENCE** Monthly the Scientists and Engineers have given to the public for their own use the Automobile, Radio, Aeroplane, Electric Refrigeration and scores of Electronic Devices which have made life easier



and better. It is now part of the work of the **POPULAR SCIENCE** Monthly to help people to understand and use these products for their greatest value. So, what might be called Service Departments have been added to **POPULAR SCIENCE** Monthly to enable people to make the best use of these developments — to enable them to take advantage of the products of science available for better

home building and maintenance, and to show the public how to adopt the newest methods for factory production.

Science in the schools

Through the vision of Edward Livingston Youmans, Science has been made useful to all classes of the community and today in addition to the regular edition of POPULAR SCIENCE Monthly there is a special School and College Edition which is used in thousands of high schools and technical schools as a supplementary text book.

**This is our first law:
It must be interesting**

There is only one way to make science appeal to non-scientific people and that is to make it interesting.

It is a law that the POPULAR SCIENCE Monthly must be interesting.

Most of us are not given to concentrated thought. We are inclined to feel and act. Our

minds speed from one topic to another, finding interest in a hundred things that really do not concern us, but seeking always for ideas, for new things to think about.

Ideas make life worth while. All work is drudgery unless it is inspired by ideas.

The make-up of the magazine, which seems a haphazard affair, is perhaps the most perfect object lesson illustrating the way the mind of the average man works.



It reads as a group of people talk, flashing from one subject to another, superficially unrelated yet having an invisible bond, giving important things longer, more serious attention, touching lightly upon those merely entertaining.

POPULAR SCIENCE Monthly has as many illustrations as can be crowded into the magazine because the picture is the quickest, surest way of communicating ideas.

Each month some 200 new ideas are pictured and explained — ideas that eliminate drudgery.

Drudgery is not a permanent form. It is one's attitude that makes one's work drudgery or makes it a vocation that is interesting.

This is fundamental.

To define the work of the POPULAR SCIENCE Monthly is to define civilization.

Civilization is a result of bringing to the individual the fruits of all the experiments, ideas and discoveries the whole world has accumulated, and is accumulating.

POPULAR SCIENCE Monthly marches on

POPULAR SCIENCE Monthly is growing just as fast as people become acquainted with it.

It is one of the few periodicals that are an economic necessity.

Herbert Spencer talked to 12,000 men through the old **POPULAR SCIENCE** Monthly. The scientists of to-day talk to over three-quarters of a million men through today's **POPULAR SCIENCE** Monthly.

Edward Livingston Youmans is dead — but his vision lives. The new **POPULAR SCIENCE** Monthly marches on into its eighth decade of usefulness.



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